

REMARKS

At the outset, Applicants respectfully request substitution of the sequence listing on file with the sequence listing submitted herewith. An explanation of the changes to the substitute sequence listing from that which was originally filed is provided below. Support for the changes is also provided by the deposit of the original gene 819PH59 in *E. coli* XL1-Blue has been deposited with and accepted by the ATCC located at 10801 University Blvd., Manassas, VA 20110-2209, on November 26, 2002. The Patent Deposit Designation is PTA-4822.

Status of the Claims

Claims 1-90 are pending. Claims 1-59 and 65-90 were withdrawn from further consideration in response to a restriction requirement by the Examiner, under 37 C.F.R. §1.142(b).

In the present Response, claims 1- are cancelled; claims 60 and 61 are amended; and new claims 91-112 are added. Thus, after entry of these amendments, claims 60-64 and 91-112 are presented for consideration.

Pursuant to the Office Action, claims 60-64 are rejected under 35 U.S.C. §112, first paragraph. Applicants respectfully traverse all outstanding objections to the specification and rejections of the claims.

Support for the Claim Amendments

Support for amendments to the claims can be found in the specification, in general, as well as ATCC deposit PTA-4822. Support for new claims 91-96, directed to the claimed method using the recombinant expression systems, can be found at least at page 63, paragraph 207, to page 67, paragraph 222. Support for new claims 97 and 98, directed to a particular recipient of the foodstuff, can be found at least at page 1, paragraph 3, to page 3, paragraph 5. Support for new claims 99 and 100, directed to a type of plant useful in the invention, can be found at least at 91, paragraph 282. Support for new claims 101-106 can be found at least at page 5, paragraph

13. Support for new claims 107-112, directed to methods of producing a transgenic plant, can be found at least at page 87, paragraph 272, to page 91, paragraph 282.

Objections to the Specification

The Patent Office alleges that the use of trademarks is noted throughout the application. Applicants have amended the specification to properly reference trademarks.

The Patent Office alleges that the newly submitted sequence listing submitted on November 13th is not supported by the specification as filed. Applicants herewith submit a new substitute sequence listing. In the instant sequence listing, SEQ ID NO:10 merely corrects the omission of two residues (169 and 278) in SEQ ID NO:10. The total length of SEQ ID NO:10 is 432 amino acids, which is the same as that of SEQ ID NO:8, the wild-type polypeptide sequence. The extra amino acids that were inadvertently added were a translated portion of the vector.

The newly submitted sequence listing amends SEQ ID NO:5 and SEQ ID NO:6 to comply with the Preliminary Amendment filed on December 17, 2001.

The Patent Office states that it is unclear from the Remarks of the previously filed Amendment of November 13th, what the miscalculations of SEQ ID NO:7 were to amend the sequence listing. Applicants submit that the substitute sequence listing seeks to correct SEQ ID NO:9. SEQ ID NO:9 is the nucleotide sequence that encodes the amino acid sequence of SEQ ID NO:10 (the modified polypeptide); however, as originally filed, SEQ ID NO:9 is exactly the same as SEQ ID NO:7, the wild type. Therefore, SEQ ID NO:9, as originally filed cannot be correct.

In determining what the proper sequence is for SEQ ID NO:9, Applicants respectfully submit that the SEQ ID NO:9 must encode for the modified polypeptide sequence of SEQ ID NO:10. However, if one were to modify the wild type SEQ ID NO:7 with the modification set forth on page 14, lines 9-19, of the specification, one would see that the translation of such a modified SEQ ID NO:7 would not result in the polypeptide having SEQ ID NO:10. If, however, one were to make the modification to the nucleotides of SEQ ID NO:7 one less than that which is

stated, they result in a polynucleotide that encodes all the desired modification of SEQ ID NO:10 with the exception of the modification of K97C. For this modification, it is to be noted that no modifications are desired at nucleotide positions 447 and 448 (the stated nucleotide position -1). If, however, these modifications are made at positions 477 and 478, which follow the modification at 476, this would result in the desired modification of K97C of SEQ ID NO:10.

Once these corrections are made, they result in the amino acid sequence of SEQ ID NO:10 and the nucleotide sequence of SEQ ID NO:9 which encodes for SEQ ID NO:10. That these modifications are correct is supported by ATCC deposit PTA-4822. Accordingly, no new matter is introduced by the substitute sequence listing.

Objections to the Drawings

The Patent Office objects to the drawings under 37 CFR 1.84 or 1.152. Applicants submit formal drawings to obviate the objection. In addition, Applicants have amended Figure 1, to Figures 1a and 1b, and Figure 8, as shown in the copy with changes in red ink. These changes are supported by the specification and the ATCC deposit PTA-4822. Accordingly, no new matter is introduced by the formal drawings.

Objections to the Claims

The Patent Office objects to claim 60 for depending upon a non-elected claim. Applicants have amended claim 60 to obviate this objection. Claim 61 is also objected to for being partially drawn to non-elected subject matter. Applicants have amended claim 61 to obviate this objection.

Issues under 35 U.S.C. §112, first paragraph

The Patent Office rejected claims 60-64 under 35 U.S.C. §112, first paragraph, for allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one of skill in the relevant art that the inventor(s), at the time the

application was filed, had possession of the claimed invention. The Patent Office alleges that this is a new matter rejection based on the sequence listing submitted on November 13, 2002.

Applicants herewith present, in a newly submitted substitute sequence listing, the correct sequence of the modified polypeptide of the invention, SEQ ID NO:10, which is 432 amino acids in length. The corrected SEQ ID NO:10 no longer contains the 4 additional amino acids that were inadvertently added.

Applicants have explained the need to amend the sequence listing in the previous section. Applicants submit that the polypeptide of SEQ ID NO:10, as originally filed, is the same as that of amended SEQ ID NO:10; therefore, Applicants were in possession of the claimed invention at the time the application was filed. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection to claims 60-64 under 35 U.S.C. §112, first paragraph.

Issues regarding Double Patenting

The Patent Office notes that application Serial No. 10/156,660 discloses a polynucleotide that encodes the polypeptide of SEQ ID NO:10 of the instant invention and also discloses a polypeptide which has 100% sequence identity to SEQ ID NO:10. However, the '660 application is not available to the Examiner. The Patent Office further notes that if it is later determined that there are conflicting claims between the '660 application and the instant application, double patenting will not be considered as a new ground(s) of rejection.

CONCLUSION

Applicants request that the Examiner reconsider the application and claims in light of the foregoing reasons and amendments and respectfully submit that the claims are in condition for allowance.

If, in the Examiner's opinion, a telephonic interview would expedite the favorable prosecution of the present application, especially with respect to the sequence listing, the

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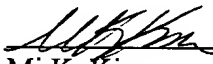
undersigned attorney would welcome the opportunity to discuss any outstanding issues and to work with the Examiner toward placing the application in condition for allowance.

Attached is a marked-up version of the changes being made by the current amendment.

Applicants believe that no additional fees are necessitated by the present Response. However, in the event any such fees are due, the Commissioner is hereby authorized to charge any such fees to Deposit Account No. 06-1050.

Respectfully submitted,

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